

REMARKS/ARGUMENTS

Claims 30, 35, 36, 38-44 and 46-63 are pending in this application. By this Amendment, Claims 30 and 52 are amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Independent Claims 30 and 52 are amended to clarify that the cooling chamber has an open bottom with an opening. These claimed features are clearly supported by the originally-filed application, for example, at Fig. 2 and Page 8, Lines 17-23. Accordingly, the amendments are entered for clarity purposes only in response to a matter of form pointed out by the Examiner, and not to overcome any prior art. No new matter is added.

FORMAL MATTERS

Claims 30, 35, 36, 38-44, and 46-63 stand objected to because of the claimed word “its”. By this Amendment, independent Claims 30 and 52 have been amended to recite that the cooling chamber has an open bottom, as suggested by the Examiner to eliminate the word “its”. Withdrawal of the objection is respectfully requested.

NON-OBOVIOUSNESS

Boese, Brenik and Thomas

Claims 30, 38, 40-44, 46-49, 52, 53 and 56-63 stand rejected under 35 U.S.C. §103(a) over Boese (U.S. Patent No. 4,566,283) in view of Brenik, et al. (4,397,158) and Thomas (U.S. Patent No. 6,389,828). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Boese fails to disclose a cooling chamber that the cooling agent is supplied thereto, the cooling chamber having an open bottom, a first temperature sensor, a controller, a first temperature sensor, and a second temperature sensor, wherein the controller is adapted to detect several temperatures as control variables, and a multiple controller adjusting the first heating performance and a second heating performance as manipulated variables. The Examiner asserts that Brenik teaches a nozzle head 3 having an open bottom that is connected to a piping system 8, with the nozzle head used to distribute a mixture of a cooling medium and air. The Examiner further asserts that Thomas teaches a cooling chamber (103), a temperature sensor (550) and a controller (553) as claimed. However, Applicants respectfully submit that the combination of Boese, Brenik and Thomas do not teach and would not have resulted in a controller for temperature control, the controller having an input side connected to a first temperature sensor and a second temperature sensor, as recited in independent Claims 30 and 52.

Applicants' study of Boese and Brenik reveals that neither reference discloses any kind of temperature controller. For this feature, the Examiner relies upon Thomas, asserting that Thomas discloses a temperature controller at column 10, lines 49-55. However, the cited portions of Thomas, and in fact the entire reference of Thomas does not disclose or teach two temperature sensors being connected to the controller, as recited in Claims 30 and 52. In particular, the controller 553 shown in Fig. 11 of Thomas is merely connected to a single temperature sensor 550. Therefore, Thomas does not disclose or teach that the controller 553 evaluates the temperature signals of two separate temperature sensors. Thus, Thomas also does not teach or suggest a controller for temperature control having an input side connected to a first temperature sensor and a second temperature sensor. Accordingly, a combination of the

teachings of Boese, Brenik and Thomas would not have resulted in at least this claimed feature of Claims 30 and 52. Claims 38, 4044, 46-49, 53 and 56-63 each depend from one of the independent claims, and are also believed to be allowable for at least the reasons discussed above. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Boese, Brenik, Thomas and Ritter

Claims 35 and 54 stand rejected under 35 U.S.C. §103(a) over Boese as modified by Brenik and Thomas, and further in view of Ritter (U.S. Patent No. 3,245,248). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Boese, Brenik and Thomas fail to teach that several temperature sensors connected to the controller are provided for measuring the chamber temperature in the cooling chamber, wherein the temperature sensors are arranged in a spatially distributed manner for measuring a spatial distribution of temperature, and relies on Ritter for teaching these features. However, Applicants respectfully submit that Ritter does not teach the features discussed above as missing in the combination of Boese, Brenik and Thomas. In particular, Ritter does not teach a controller for temperature control having an input side connected to a first temperature and a second temperature sensor as recited in independent Claims 30 and 52, from which Claims 35 and 54 respectively depend.

The Examiner asserts that Ritter discloses a controller (12) that is integrally connected to two temperature sensors (thermometers 21 and 15). However, the controller 12 of Ritter is merely connected with a temperature probe 10 via a wire 11. The additional thermometers 15

and 25 are not connected to the controller 12. See Ritter, column 1, lines 58-60 and column 1, lines 70-column 2, line 10.

The controller 12 merely evaluates the temperature signal provided by the temperature probe 10 (Ritter, column 2, lines 35-37). The additional thermometers 15, 21 are merely connected with the signal sequencer 17 so that the temperature signals provided by the thermometers 15, 21 can be recorded by the recorder 24. However, the temperature signals provided by the thermometers 15, 21 are not used for controlling the heating power of the heating element 5. Therefore, Ritter also does not teach a controller for temperature control having an input side connected to a first temperature and a second temperature sensor as recited in Claims 30 and 52. As discussed above, Ritter also does not teach a controller that evaluates the temperature signals provided by two separate temperature sensors. Therefore, a combination of the references would not have resulted in the subject matter of Claims 30 and 52, from which Claims 35 and 54 depend. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Brenik, Thomas, Ritter and Sitte, et al.

Claims 36 and 55 stand rejected under 35 U.S.C. §103(a) over Boese as modified by Brenik, Thomas and Ritter, and further in view of Sitte, et al. (U.S. Patent 6,178,757). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Boese, Brenik, Thomas and Ritter fail to teach that at least one of the temperature sensors is a temperature-dependent electrical resistor, and relies upon Sitte, et al. for teaching the missing feature. However, Sitte, et al. does not teach the claimed subject

matter of independent Claims 30 and 52 missing in the above-discussed references, as Sitte also does not teach a controller for temperature control having an input side connected to a first temperature and a second temperature sensor. Therefore, the combination of Boese, Brenik, Thomas and Ritter would not have resulted in the subject matter of Claims 30 and 52, from which Claims 36 and 55 depend. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Boese, Brenik, Thomas and Hammerstedt, et al.

Claim 39 stands rejected under 35 U.S.C. §103(a) over Boese, as modified by Brenik and Thomas, and further in view of Hammerstedt, et al. (U.S. Patent No. 6,065,294). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Boese, Brenik and Thomas fail to teach that the first temperature sensor and the second temperature sensor are connected to storage equipment that stores the temperature courses, and asserts that it would have been obvious to modify the combination to include a memory that stores temperature courses as taught by Hammerstedt in order to control the temperature of the chamber based on past temperature trends. This assertion is respectfully traversed, as Hammerstedt does not teach a controller for temperature control having an input side connected to a first temperature and a second temperature sensor, as recited in Claim 30, from which Claim 39 depends. Therefore, Hammerstedt does not teach at least this feature missing in the above-discussed references. Accordingly, the combination of references would not have resulted in this feature. Withdrawal of the rejection of Claim 39 is respectfully requested.

Boese, Brenik, Thomas and Bash, et al.

Claims 50 and 51 stand rejected under 35 U.S.C. §103(a) over Boese as modified by Brenik and Thomas, and further in view of Bash, et al. (U.S. Patent No. 7,031,154). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Boese, Brenik and Thomas fail to teach that the first temperature sensor is connected to a transponder that transmits a measured temperature in a wireless manner to the control device, and asserts that it would have been obvious to modify the cooling equipment of Boese, Brenik and Thomas to include the wireless transmission of temperature data to a controller, as taught by Bash, to eliminate the use of wires. However, Bash also does not teach a controller for temperature control having an input side connected to a first temperature and a second temperature sensor as recited in Claim 30, from which Claims 50 and 51 depend. Therefore, a combination of all of these references still would not have resulted in the subject matter of the claims. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants'

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undersigned attorney at the telephone number listed below to expedite prosecution of the application.

Respectfully submitted,

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August 10, 2011

Please charge or credit our Account
No. 03-0075 as necessary to effect
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By



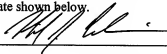
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Michael J. Cornelison